

# **EPA Reg. No. 12455-148**

# PROCESSING REQUEST

Reg # 12455-148

Decision # 530566

Description: new product

Electronic Label & Letter  
(see PPLS):

OR

Non Electronic  
Label & Letter  
(Scanning required):

☒ Dated: 6/29/2017

☐ Dated:

\*\*\*Only one label type should be selected\*\*\*

Other Materials Sent (see jacket):

☒ New CSF(s) Dated: 6/9/2017

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Jacquelyn Herrick

Division: RD

Phone: 703-347-0559

Date: 7/5/2017



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

12455-148

Date of Issuance:

6/29/17

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Rat Ice

Name and Address of Registrant (include ZIP Code):

Bell Laboratories, Inc.  
3699 Kinsman Blvd.  
Madison, WI 53704

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

Signature of Approving Official:

Mark Suarez, Product Manager 07

Invertebrate-Vertebrate Branch 3, Registration Division (7505P)

Date:

6/29/17

3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 12455-148."
4. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 6/9/2017

If you have any questions, please contact Jacquelyn Herrick by phone at 703-347-0559, or via email at [herrick.jacquelyn@epa.gov](mailto:herrick.jacquelyn@epa.gov).

Enclosure

# RAT ICE

***KILLS RATS IN BURROWS***

**FOR OUTDOOR USE ONLY**

**ACCEPTED**

Jun 29, 2017

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No 12455-148

**ACTIVE INGREDIENT:**

Carbon Dioxide\* (CAS #124-38-9):.....100.0 %

Total.....100.0 %

\* in solid form also known as "Dry Ice" in approx.. ½ to ¾ inch diameter pellets.

**KEEP OUT OF REACH OF CHILDREN**

## WARNING

### FIRST AID

#### HAVE LABEL WITH YOU WHEN OBTAINING TREATMENT ADVICE

##### IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice.

##### IF ON SKIN OR CLOTHING:

- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

##### IF IN EYES:

- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-854-2494 for emergency medical treatment information.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**IMPORTANT:** Do not expose children, pets, or non-target animals to dry ice.

**WARNING:** May be fatal if inhaled. Do not breathe vapor. Exposure may cause suffocation and death. Exposure to high levels may occur without warning or detection to user.

**NEVER TOUCH DRY ICE WITH BARE HANDS.** Contact with skin can cause cold burns, blistering, and frostbite.

**DO NOT** store in small, unventilated areas (e.g. unventilated car, closed truck beds, unventilated closets, etc.).

**Avoid contact with water** (e.g. rainfall, irrigation, humidity) since it will increase the sublimation rate of dry ice.

EPA Establishment No.: _____
Filled on: ____/____/____
This pesticide may only be used for 7 days after the fill date, after which it must be discarded and the container refilled with Rat Ice at a registered establishment.
Dry Ice No. _____

**PERSONAL PROTECTION EQUIPMENT:** All handlers (including applicators) should wear insulating gloves and use appropriate eye protection.



3699 Kinsman Blvd.  
Madison, WI 53704

EPA REG. NO. 12455- xxx

EPA EST. NO.

NET WEIGHT:  
10 - 100 lbs

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**READ THIS LABEL:** Read this entire label and follow all use directions and use precautions. Use only for the sites, pests, and application methods described on this label.

## **USE RESTRICTIONS:**

### **FOR OUTDOOR USE ONLY**

Apply this product to active burrows to control Norway rats, roof rats and Polynesian rats around industrial, commercial, public and residential areas. Apply this product to homes & lawns, campgrounds; golf courses; public parks, and commercial nurseries.

**For inhabited buildings:** Burrows being treated must be at least 10 feet away from buildings that are actively inhabited. Prior to treatment, confirm that rats have **NOT** entered the building structure from exterior burrows. Ensure the foundation is in good condition, free of holes or gaps. This will prevent the carbon dioxide treatment from entering the building. Do not apply dry ice near any exterior door thresholds or nearby any building air intake vents or while people or animals are inhabiting building structure.

**For uninhabited buildings:** Burrows being treated can be within 10 feet of building but must be applied to the outside of the building only. Building must remain uninhabited for a minimum of 72 hours post treatment.

Do not apply product to burrows or dens known or believed to contain non-target vertebrate animals.

## **SELECTION OF TREATMENT AREAS:**

**Inspect infestation area.** Select areas where active burrows have been identified. Signs of activity include rat sightings, visible runways, presence of burrow holes and soft soil undermined with tunnels. Burrows can also be located beneath shrubbery and debris. Focus on entrances 2-4" wide with smooth surfaces and deposits of excavated soil, trampled vegetation or packed soil as these are good indicators of actively used burrow entrances. Small systems can comprise one main entrance and one or two bolt holes usually 5-6 ft. away from main entrance. More established burrows can comprise many (5-20) with complicated tunnel configurations. Identifying and treating the complete number of burrow openings is crucial to the efficacy of this product.

## **APPLICATION DIRECTIONS:**

Apply during daylight hours (the time when burrowing rodents are least active).

### **Application rate**

Apply 0.5 – 2.5 lbs per burrow opening using an appropriate scoop. Exact amount will depend on burrow opening size and depth.

Treat **ALL** identified burrow openings and bolt holes. Apply dry ice at the application rate provided. Slowly feed in **ALL** the dry ice pellets, packing down into the openings. Cover hole to monitor for initial efficacy or reinvasion. Watch post application for any signs of escaping rats from the treated burrow system.

## **FOLLOW UP**

Dead rats may not be visible in treated areas as they may likely die within the underground burrows. Signs of rodent activity (reopening of burrow openings) indicate additional treatments are required. If retreatment is required, reexamine area to confirm that all burrow openings have been found and treat all burrow openings at previous application rate.

### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**Storage:** Store only in original container in a cool, dry, well ventilated area inaccessible to children and pets.

**Pesticide Disposal:** Disposal of this pesticide product, solutions and any byproducts should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

**Container Handling:** Refillable container. Refill this container with Rat Ice only. Rat Ice is only available at a distributor who has an approved EPA company and establishment number. Do not reuse this container for any other purpose. When no longer adequate to be refilled, the container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

**WARRANTY:** To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

### **OPTIONAL MARKETING STATEMENTS:**

- Kills rats [in their burrows]
- Kills rats
- Dry ice formula
- Dry ice pellets
- Carbon dioxide based

062917



DEPARTMENT OF REGULATORY AFFAIRS  
3600 KINSMAN BLVD  
MADISON, WI 53704 USA  
608 241.0202  
FAX 608 244.1056  
[www.belllabs.com](http://www.belllabs.com)

June 12, 2017

Mr. Mark Suarez/ PM #7  
U.S. EPA Office of Pesticide Programs  
Invertebrate Branch 3  
Document Processing Desk  
Room S-4900  
One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

**Subject: Rat Ice EPA Reg. No. 12455-XXX**  
**(Active Ingredient: Carbon dioxide)**

Dear Mr. Suarez:

Bell Laboratories, Inc. is requesting approval for registration of Rat Ice EPA's direction and interest, we have prepared and have attached the following documents via EPA's electronic submission process:

- 1) Application for Pesticide Registration
- 2) Confidential Statement of Formula
- 3) Data Matrices (including product, and public versions)
- 4) Certification With Respect to Citation of Data
- 5) Waiver Request for Product Chemistry and Toxicology
- 6) Transmittal Document listing the Efficacy data and MRID number
- 7) Proposed Label

Using the Decision Tree under PRIA, it appears that this action falls into Category R310 with a service fee determination of \$5301. This amount has been submitted as an ACH payment online (Pay.gov Tracking ID: 262UTFUT).

If you have any questions or need any additional information, please do not hesitate to contact me at (608) 241-0202 Ext. 3138.

Sincerely,

A handwritten signature in black ink, appearing to read "John Lublinkhof".

John Lublinkhof, Ph.D.  
Director of Regulatory Affairs

*Attachments*



United States  
Environmental Protection Agency  
Washington, DC 20460

☒ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

**Application for Pesticide - Section I**

1. Company/Product Number 12455-XXX	2. EPA Product Manager Mark Suarez	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Rat Ice	PM# 7	
5. Name and Address of Applicant (Include ZIP Code) Bell Laboratories, Inc. 3699 Kinsman Blvd. Madison, WI 53704 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(ii), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

**Section - II**

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input checked="" type="checkbox"/> Other - Explain below.

**Explanation:** Use additional page(s) if necessary. (For section I and Section II.)

A dry ice cooler will be used as the container in which to deliver the product. The cooler has the following attributes: made of high quality materials, durable, special tight seal, designed so it won't fall over, and has a professional look. The cooler must be filled at a distributor who has an approved EPA company and establishment number.

**Section - III**

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Metal	
* Certification must be submitted				<input checked="" type="checkbox"/> Plastic	
				<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input checked="" type="checkbox"/> Other (Specify) Styrofoam	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input checked="" type="checkbox"/> Front label on container	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper, glued Stenciled			<input type="checkbox"/> Other _____		

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name John Lublinkhof		Title Director of Regulatory Affairs		Telephone No. (Include Area Code) 608-241-0202	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Date Application Received  <b>(Stamped)</b>
2. Signature 		3. Title Director of Regulatory Affairs			
4. Typed Name John Lublinkhof		5. Date June 12, 2017			

**TRANSMITTAL DOCUMENT**

**1. NAME AND ADDRESS OF SUBMITTER**

Bell Laboratories, Inc.  
3699 Kinsman Blvd.  
Madison, WI 53704 U.S.A.

**2. REGULATORY ACTION IN SUPPORT OF WHICH THIS PACKAGE IS SUBMITTED**

Registration approval of Rat Ice (EPA Reg. No. 12455-xxx), under the authority of section 3 of the Federal Insecticide, Fungicide and Rodenticide Act as amended (FIFRA), 7 U.S.C. section 136a (c)(2)(B), and section 408 (f)(1)(A) of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. section 346a (f)(1)(A).

**3. TRANSMITTAL DATE**

June 12, 2017

**4. LIST OF SUBMITTED STUDIES**

Volume 1: Administrative Materials: Cover Letter, Transmittal Document, Application for Pesticide Registration, Confidential Statement of Formula, Data Matrices (including product, public and technical), Certification with Respect to Citation of Data, Product Chemistry Waiver Request, Toxicology Waiver Request, and copy of payment transaction.

Volume 2: Efficacy of Carbon Dioxide (CO<sub>2</sub>) as a Rodenticide under Laboratory and Field Conditions; Study No. EXP-17-ET9072; MRID 50279501

**Company Official:**

  
John Lublinkhof  
Director of Regulatory Affairs

**Company Name:** Bell Laboratories, Inc.

**Company Contact:** April Vingum

**Phone:** (608) 241-0202

# DATA PACKAGE BEAN SHEET

Date: 21-Jun-2017

Page 1 of 1

Decision #: 530566

DP #: (440948)

PRIA

Parent DP #:

Submission #: 1004869

E-Sub #: 20324

## \*\*\* Registration Information \*\*\*

Registration: **12455-RUI - Rat Ice**

Company: 12455 - BELL LABORATORIES, INC

Risk Manager: RM 07 - Mark Suarez - (703) 305-0120 Room# PY1 S-9722

Risk Manager Reviewer: Jacquelyn Herrick JHERRI04

Sent Date: \_\_\_\_\_

PRIA Due Date: 04-Jun-2018

Edited Due Date: \_\_\_\_\_

Type of Registration: Product Registration - Section 3

Action Desc: (R334) NEW PRODUCT;MUP OR END USE PRODUCT WITH UNREGISTERED SOURCE OF

Ingredients: \_\_\_\_\_

## \*\*\* Data Package Information \*\*\*

Expedite: ☐ Yes ☒ No

Date Sent: 21-Jun-2017

Due Back: \_\_\_\_\_

DP Ingredient: \_\_\_\_\_

DP Title: PC Review

CSF Included: ☐ Yes ☒ No

Label Included: ☐ Yes ☒ No

Parent DP #: \_\_\_\_\_

Assigned To

Date In

Date Out

Organization: RD / CITAB

Last Possible Science Due Date: 05-Apr-2018

Team Name: CHEM

Science Due Date: \_\_\_\_\_

Reviewer Name: \_\_\_\_\_

Sub Data Package Due Date: \_\_\_\_\_

Contractor Name: \_\_\_\_\_

## \*\*\* Studies Sent for Review \*\*\*

No Studies

## \*\*\* Additional Data Package for this Decision \*\*\*

No Additional Data Packages

## \*\*\* Data Package Instructions \*\*\*

PC Reviewer,

Please review the waiver request, label and CSF, and determine their acceptability in supporting the proposed product 12455-RUI.

Thanks,  
Jackie Herrick



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460  
OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION  
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

**FEE**

**DATE:** June 13, 2017

**SUBJECT:** End Use Product Chemistry Review  
Product Name: Rat Ice

**FROM:** Akiva Abramovitch, Ph.D.  
CITAB / RD (7505P)

*A*

**THROUGH:** Shyam B. Mathur, Ph.D.  
Product Chemistry Team Leader  
CITAB / RD (7505P)

*SBW 6114117*

**TO:** Jacquelyn Herrick / Mark Suarez, PM Reviewer / RM 07  
IVB1 / RD (7505P)

**Company Name:** Bell Laboratories.  
**Active Ingredient(s):** Carbon Dioxide (100.0%)  
**EPA File No.** 12455-RUI  
**Product Name:** Rat Ice

**INTRODUCTION:**

The registrant Bell Laboratories (Company number 12455) has submitted an application for the registration of Rat Ice (Dry Ice/Carbon Dioxide) as an end use product to kill rats in burrows. In support of the application the registrant provided a CSF dated June 9, 2017 and a label. The product will be produced by [REDACTED]. To address the 830 series group A & B product chemistry data, the registrant is referring to the Reregistration Eligibility Document (RED) of Carbon and Carbon Dioxide of September 1991. The CITAB has been asked to determine acceptability of the cited RED and the CSF dated June 9, 2017.

**SUMMARY OF FINDINGS:**

The pending CSF dated June 9, 2017 is identical in composition to the CSF of the technical Carbon Dioxide product addressed in the September 1991 RED. The following was copied from page 5 of the Carbon Dioxide RED chapter.

### Carbon dioxide

Carbon dioxide is a colorless, odorless, noncombustible gas. Its molecular weight is 44.01. Solid carbon dioxide is known as dry ice and the sublimation temperature at atmospheric pressure is  $-74.5^{\circ}\text{C}$ . The solubility of  $\text{CO}_2$  in water is 0.14 g/100 g water; it is less soluble in organic solvents. The specific gravity relative to air at  $24^{\circ}\text{C}$  is 1.53. When added to alkaline solutions carbonates are formed (6).

Carbon dioxide is a naturally occurring gas found in the atmosphere which is required for plant and animal life. It is a product of animal metabolism and is essential for plant and animal respiration (6). It was first identified by Joseph Priestley about two hundred years ago and has been extensively studied since then.

Carbon dioxide is used for a wide variety of non-pesticide applications. Probably the best known use is for the carbonation of beverages. It may also be used in refrigeration, fire fighting, welding operations, rubber tumbling, mining operations, and oil well secondary recovery. Medical applications include use as a coma-inducing agent in psychiatric treatment and as a constituent of therapeutic oxygen.

Carbon dioxide is used as a pesticide for insect control in stored grain under modified atmospheres containing approximately 60% carbon dioxide.

#### **CONCLUSION:**

The CSF dated June 9, 2017 for Rat Ice, EPA File No.12455-RUI, is acceptable.

# DATA PACKAGE BEAN SHEET

Date: 22-Jun-2017

Page 1 of 2

Decision #: 530566

DP #: (440980)

PRIA

Parent DP #:

Submission #: 1004869

E-Sub #: 20324

## \*\*\* Registration Information \*\*\*

Registration: 12455-RUI - Rat Ice

Company: 12455 - BELL LABORATORIES, INC

Risk Manager: RM 07 - Mark Suarez - (703) 305-0120 Room# PY1 S-9722

Risk Manager Reviewer: Jacquelyn Herrick JHERRI04

Sent Date: \_\_\_\_\_

PRIA Due Date: 04-Jun-2018

Edited Due Date: \_\_\_\_\_

Type of Registration: Product Registration - Section 3

Action Desc: (R334) NEW PRODUCT;MUP OR END USE PRODUCT WITH UNREGISTERED SOURCE OF

Ingredients: \_\_\_\_\_

## \*\*\* Data Package Information \*\*\*

Expedite: ☐ Yes ☒ No

Date Sent: 22-Jun-2017

Due Back: \_\_\_\_\_

DP Ingredient: \_\_\_\_\_

DP Title: Efficacy

CSF Included: ☐ Yes ☒ No

Label Included: ☐ Yes ☒ No

Parent DP #:

### Assigned To

### Date In

### Date Out

Organization: RD / IO

Last Possible Science Due Date: 05-Apr-2018

Team Name: IVB Vertebrate Efficacy Team

Science Due Date: \_\_\_\_\_

Reviewer Name: \_\_\_\_\_

Sub Data Package Due Date: \_\_\_\_\_

Contractor Name: \_\_\_\_\_

## \*\*\* Studies Sent for Review \*\*\*

Printed on Page 2

## \*\*\* Additional Data Package for this Decision \*\*\*

Can be printed on its own page

## \*\*\* Data Package Instructions \*\*\*

Vertebrate efficacy reviewer:

Please review the study and label and determine their acceptability in supporting the new product 12455-RUI.

Thanks,  
Jackie

DP#: (440980)

Page 2

\*\*\* Studies Sent for Review \*\*\*

Decision#: (530566)

MRID	MRID Status	Citation Reference	Guideline	86-5 Status
50279501		Markham, J. (2017) Efficacy of Carbon Dioxide (CO2) as a Rodenticide under Laboratory and Field Conditions. Project Number: EXP/17/ET9073,. Unpublished study prepared by Bell Laboratories, Inc. and RMC Pest Management Consulting. 27p.		Pass (22-Jun-2017)

## EFFICACY REVIEW

PRODUCT: 12455-RUI, Rat Ice  
Bell Laboratories, Inc.  
3699 Kinsman Blvd.  
Madison, WI 53704

DATE: June 27, 2017

DP NUMBER: 439220

DECISION NUMBER: 530566

GLP: Yes

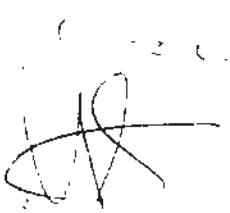
CHEMICAL: Carbon dioxide (dry ice)

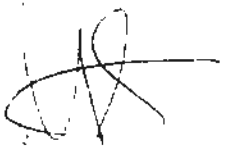
EPA PC CODE: 016601

PURPOSE: Review submitted data to determine if they support the use of dry ice to treat rat burrows

MRID: 50279501

TEAM REVIEWER: Jacquelyn Herrick, M.S.

EFFICACY REVIEWER: Gene Benbow, M.S.  6/27/17

SECONDARY  
EFFICACY REVIEWER: Mark Suarez, M.S.  6/27/17

BACKGROUND:

The Agency received an application from the applicant, Bell Laboratories to register dry ice (i.e., solid carbon dioxide) as a pesticide to treat rat burrows. This pending application is largely the result of the unregistered use of this material having occurred for some time, with one of the EPA regions having identified it as a pesticide use. Thus, this is an attempt to remedy the situation by having the material registered under a section 3 registration.

There are presently 5 carbon dioxide products registered for use against a variety of pests including ants, stored product pests, and house mice. To date, carbon dioxide has not previously been registered in solid form (i.e., "dry ice"). While field trials evaluating methyl bromide served as a means for designing ground squirrel and/or other field rodent efficacy tests using fumigants (Berry, 1938), there has not been as much interest in testing fumigants for use in rat burrows in urban settings. With typical anticoagulant rodenticide baits, active rat burrows are generally identified and baited, with the burrows being left "opened" for a period of time following baiting versus being closed/caved-in. This is done due to the belief that closing the burrows immediately following bait application may obscure the bait (by having it covered with soil/debris), or may result in the rat "ejecting" all of the material (both bait and dirt/debris) from its burrow opening as a behavioral response to maintain the integrity of its burrow system. After waiting for one to two weeks used to allow for the effects of the rodenticide to take effect, the applicator then returns to close the burrow, with a follow-up to occur within a day or so to determine whether the burrow is still active. Reopened (active) burrows are then retreated, with the process repeating until the burrows are no longer active (i.e., the occupant is either dead or has abandoned the

burrow). As a carbon dioxide treatment could be judged to be a success or failure in a far shorter period of time than most baits registered for burrow treatments, dry ice could provide an efficient (and safer) pesticide tool to treat rat burrows in urban areas.

This application includes a summary report of some laboratory testing by Bell to determine the rate of sublimation of various sizes of dry ice pellets at environmentally-relevant temperatures, a laboratory lethality test of lab-strain Norway rats in several different "model" burrows, and a field trial conducted to determine the efficacy of dry ice used to treat Norway rat burrows under actual use conditions.

## DATA SUMMARY

Markham, J. (2017) Efficacy of Carbon Dioxide (CO<sub>2</sub>) as a Rodenticide under Laboratory and Field Conditions. Project Number: EXP/17/ET9073. Unpublished study prepared by Bell Laboratories, Inc. and RMC Pest Management Consulting, 27p.

MRID# 50279501

To greatly summarize the nature of the sublimation-rate tests, Bell reportedly tested sublimation of 99.9 g and 12.2 g-sized dry ice pellets at room temperature; sublimation rates of a single piece of dry ice of approximately 12 g versus multiple pieces of approximately 12 g; sublimation of 100 g of dry ice pellets at 3, 19.5, and 29.6°C; and sublimation of 13.748 kg of dry ice pellets in a sealed, insulated cooler. Results for these tests were unsurprising in most cases, but provide information which would be expected to inform operational use of the material. For the testing done at room temperature, the results are provided in the following table which I have recreated from Bell's report.

Starting mass	Time to sublimation	Initial % mass decrease
99.9 g	190 min	10%
12.2 g	100 min	16%

Unsurprisingly, the smaller piece of dry ice (12.2 g) sublimated more rapidly than the larger (99.9 g) piece. Further, when testing the rate of sublimation for a single piece of dry ice of about 12 g versus multiple pieces of about 12 g in total, the rate of sublimation for the multiple pieces was faster than that of the single piece.

Results from the testing of 100 g of dry ice at various temperatures is provided in the table below.

Temperature	Sublimation time	Rate (g/min)
3°C	225 min	0.46
19.5°C	194 min	0.52
29.6°C	171 min	0.59

Also unsurprising was that an approximately equivalent amount of dry ice sublimated more quickly at the 29.6°C temperature than at 19.5°C (~room temperature) and 3°C.

Testing of 13.748 kg (~ 30 lbs) of dry ice pellets in an insulated cooler suggested to the researchers that sublimation would complete in about 83 hours. Thus, a cooler of a similar size and composition (e.g., vinyl) to the one tested would be expected to be of practical value to applicators during operational use.

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The second portion of Bell's report presents the findings of several laboratory trials using model rat burrows (made from PVC) with applications of dry ice to determine carbon dioxide concentrations reached within the

burrow chamber, and also trials using lab-strain rats to determine the effects (including lethality) of the material at various carbon dioxide concentrations within the burrows.

To summarize the results, for the testing of a 200-gram rat within a simple model burrow, symptoms of sedation were evident within 2 minutes (33% carbon dioxide) and unconsciousness was reported at 4 minutes (47% carbon dioxide). The time-to-death for that individual was reportedly 5.75 minutes (>50% carbon dioxide). To determine any differences in rats of different weights, a follow-up test was performed comparing a 191- and 395-gram rat tested in the same manner. Results from that test are presented in the following table.

Rat ID	Weight	Time to sedation	Time to unconsciousness	Time to death
1	191 g	2 min	3.8 min	5.75 min
2	395 g	2 min	4 min	11.5 min

Interestingly, the time until sedation and unconsciousness for both rats was very similar, but the 395-g rat took far longer to perish than the 191-g rat. As the goal of addressing public health threats by Norway rats is not achieved by disturbing rat sleep cycles, this result clearly indicates that some consideration for the amount of material applied is required for an effective treatment.

To determine how burrow architecture may affect treatment in terms of both the diameter of the burrow opening and the underground burrow structure, the researchers tested several male Wistar rats of roughly the same body weight within several different model burrow configurations. Reported results of those tests are provided in the table below.

Configuration	Sex	Weight	Time to sedation	Time to unconsciousness	Time to death
1	m	191 g	2 min	3.8 min	5.75 min
2	m	200 g	3 min	5.75 min	10 min
3	m	195.5 g	1.5 min	-	-
4	m	202 g	3.3 min	7 min	24 min
9	m	213 g	3 min	6.5 min	11.5 min

As Norway rat burrow openings are typically from 1-3" in diameter, researchers considered that a 100-gram amount of dry ice would be ineffective, both in terms of treated a particularly sinuous burrow structure and also due to leaving large openings at the burrow opening itself. Testing was conducted using a 106.7-gram and a 454-gram (~ 1 pound), with the latter providing a more "tightly packed" burrow opening, in addition to the obviously larger amount of carbon dioxide to sublimate. Results of that testing, unsurprisingly, indicated that the 454-gram amount resulted in a higher carbon dioxide concentration being reached in a shorter period of time. The authors further speculated that packing the burrow opening more tightly may also serve as a more effective barrier to any rats which may attempt to escape during treatment.

Even for the limited model burrows tested in these trials, it is clear that the structure of the burrow system will affect whether and to what extent a rat is subjected to a lethal dose of carbon dioxide. While this research leaves questions unanswered, it does help to answer the question that most people would likely ask about use of this type of product, which is "how much of this stuff do I need to put down a typical burrow to kill a rat?" The answer suggested by these data is that about 0.5 - 2.5 lbs of dry ice pellets placed into every active burrow opening should be a good place to start, with follow-up observations and retreatment provided as necessary.

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The final portion of the report includes information related to some field work performed by Jon Stellberger and Dr. Bobby Corrigan using dry ice to treat Norway rat burrows at various locations in the NE region. Since

Bell's report presents only a summary of this information, I contacted Dr. Corrigan on 6/26/17 to discuss some of the aspects of the research. Based upon our discussion and some additional information sent via email, a rate of about 1.0 kg (~2.2 lbs) of dry ice pellets placed per *burrow system* was used, which is the amount which previous testing indicated could provide a 20% carbon dioxide atmosphere in a typical burrow system.<sup>1</sup> Applications were made from about 8-11:00 am, with the intention of treating burrows during the time when rats would be expected to be the least active, and thus the most susceptible to the gas.<sup>2</sup>

Information about the areas targeted for application and the effect of treatment is provided in the table below.

Site	Infestation Size	% reduction by 24h	Number of applications	Final % reduction
MIT, Boston	Moderate to severe (30-60 burrows)	84%	3	96%
Harvard, Boston	Moderate to severe (30-60 burrows)	87%	5	100%
Assorted urban properties (160)	Minor to severe (8-60+ burrows)	45-90%	1-5	88-100%

These results suggest that EPA's product performance criterion of a 70% reduction in activity can be reached after a single treatment with dry ice, with even better results obtained with 1 or 2 follow-up treatments to "mop up" any remaining active burrows.

## CONCLUSIONS

Though the laboratory data submitted to support this application tested a relatively small sample size of Norway rats via a limited number of model burrows systems, they are nevertheless useful in answering questions regarding whether the dry ice would be expected to work in situ.<sup>3</sup> The field data were likewise limited in some ways, and probably represent *operational rodenticide use* more so than a typical, formal field efficacy trial. With that having been said, the results of these trials suggest good efficacy under actual use conditions. Given this, there would not seem to be any compelling reason to request any additional data for this use. Therefore, these data will be accepted to support registration of EPA file symbol 12455-RUI for the proposed use in rat burrows.

## References

Berry, C.E. 1938. Bulletin of the California Department of Food and Agriculture. 27:172.

<sup>1</sup> A "typical" Norway rat burrow system per discussion with Dr. Corrigan is generally ~ 6-8 feet in length, with 3 openings (1 main entrance plus 2 "bolt" holes), of ~ 2" in diameter.

<sup>2</sup> According to Dr. Corrigan, it is not uncommon with other materials (e.g., aluminum phosphide) to result in "bolting" of rats from their burrow system during the initial application, which can confound the control effort. In his experience working with dry ice, however, this seldom happened.

<sup>3</sup> It should be noted that there are few products registered as fumigants for treating rat burrows, and thus very little data to be relied upon for purposes of registration as compared to other rodenticides.

Bobby Corrigan, Ph.D., *President, RMC Pest Management Consulting*

Email: [cityrats@mac.com](mailto:cityrats@mac.com)

Speaker biography

Dr. Corrigan has been active in urban pest management for over 30 years. He serves a consultant who specializes in urban rodent pest management on a national and international scale and also as a rodent control consultant for several cities around the USA. Dr. Corrigan has published over 160 technical articles in pest control and has authored or co-authored four textbooks and several book chapters. He has lectured in 46 states and 12 countries around the world. He has appeared in Time Magazine, The New York Times, National Geographic, The CBS Sunday Morning Show, The New Yorker Magazine, and multiple international radio shows and on-line magazines. In the autumn of 2016, he will be appearing in the Morgan Spurlock (Director/Star of *Super Size Me*) Documentary: *Rats!!*

In 2005, Dr. Corrigan was awarded the EPA's IPM Award for his novel approaches to pest control and food safety, and in 2011 he received The City of New York's Distinguished Service Award for innovative research addressing the control of rats in New York City. Dr. Corrigan was inducted into the Pest Management Hall of Fame in 2008.

Dr. Corrigan ran a pest control route in NYC for three years to save money for his college education. He holds an A.A.S degree in pest control (State University of New York); a B.S (Urban and Industrial Pest Control) from Purdue University, and his Masters and Ph.D. degrees in rodent control also from Purdue.

[From: [http://www.vpmaonline.com/images/Bobby\\_Corrigan\\_Bio.pdf](http://www.vpmaonline.com/images/Bobby_Corrigan_Bio.pdf)]

# DATA PACKAGE BEAN SHEET

Date: 21-Jun-2017

Page 1 of 1

Decision #: 530566

DP #: (440949)

PRIA

Parent DP #:

Submission #: 1004869

E-Sub #: 20324

## \*\*\* Registration Information \*\*\*

Registration: 12455-RUI - Rat Ice

Company: 12455 - BELL LABORATORIES, INC

Risk Manager: RM 07 - Mark Suarez - (703) 305-0120 Room# PY1 S-9722

Risk Manager Reviewer: Jacquelyn Herrick JHERRI04

Sent Date: \_\_\_\_\_

PRIA Due Date: 04-Jun-2018

Edited Due Date: \_\_\_\_\_

Type of Registration: Product Registration - Section 3

Action Desc: (R334) NEW PRODUCT;MUP OR END USE PRODUCT WITH UNREGISTERED SOURCE OF

Ingredients: \_\_\_\_\_

## \*\*\* Data Package Information \*\*\*

Expedite: ☐ Yes ☒ No

Date Sent: 21-Jun-2017

Due Back: \_\_\_\_\_

DP Ingredient: \_\_\_\_\_

DP Title: Tox Review

CSF Included: ☐ Yes ☒ No

Label Included: ☐ Yes ☒ No

Parent DP #: \_\_\_\_\_

### Assigned To

Date In

Date Out

Organization: RD / CITAB

Last Possible Science Due Date: 05-Apr-2018

Team Name: TOX

Science Due Date: \_\_\_\_\_

Reviewer Name: \_\_\_\_\_

Sub Data Package Due Date: \_\_\_\_\_

Contractor Name: \_\_\_\_\_

## \*\*\* Studies Sent for Review \*\*\*

No Studies

## \*\*\* Additional Data Package for this Decision \*\*\*

Can be printed on its own page

## \*\*\* Data Package Instructions \*\*\*

TOX Reviewer,

Please review the waiver request, label and CSF, and determine their acceptability in supporting the proposed product 12455-RUI.

Thanks,  
Jackie Herrick



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS  
REGISTRATION DIVISION (7505P)

June 28, 2017

**MEMORANDUM:**

Subject: Name of Pesticide Product: RAT ICE  
EPA Reg. No. /File Symbol: 12455-RUI  
DP Barcode: DP 440949  
Decision No.: 530566  
Action Code: R334  
Submission: 1004869  
E-Sub. #20324  
PC Code: 016601 (Carbon Dioxide: 100%)

From: Byron T. Backus, Ph.D., Toxicologist  
CITAB  
Registration Division (7505P)

*Byron T. Backus*  
*June 28, 2017*

Through: P.V. Shah, Ph.D., Branch Chief  
CITAB  
Registration Division (7505P)

*P.V. Shah*  
*6/28/2017*

To: Jacquelyn Herrick / Mark Suarez RM 07  
Invertebrate-Vertebrate Branch 3  
Registration Division (7505P)

Registrant: BELL LABORATORIES, INC.

**FORMULATION FROM PROPOSED LABEL:**

Active Ingredient(s):	by wt.
016601 Carbon Dioxide* (CAS #124-38-9).....	100.0%
TOTAL	100.0%

\*in solid form [also known as "Dry Ice"] in ½ to ¾ inch pellets.

**ACTION REQUESTED:** Acute toxicity review of a dry ice (solid CO<sub>2</sub>) product proposed for use as a rodenticide.

**BACKGROUND:** The material available to CITAB includes a CSF dated 06/09/17, a one-page data matrix (dated June 9, 2017) which indicates the registrant is asking for waivers of all product chemistry and toxicology data requirements, waiver requests for the 40 CFR Subpart D Product Chemistry data requirements, waiver requests for the 40 CFR Subpart F Toxicology requirements (including 870.1100, acute oral toxicity; 870.1200, acute dermal toxicity; 870.1300, acute inhalation toxicity; 870.2400 primary eye irritation; 870.2500 primary dermal irritation; 870.2600, dermal sensitization; 870.3200, 21/28-day dermal; and 870.3250, 90-day dermal, and a proposed product label (signal word: WARNING) which states that this is a Restricted Use Pesticide for outdoor use only.

#### **COMMENTS AND RECOMMENDATIONS:**

1. CITAB has examined the labels of four currently registered (label declarations ranging from 99.9 to 100.0%) carbon dioxide products (EPA Reg. Nos. 38719-5, 87766-1, 87942-1, and 91274-1). In these products the carbon dioxide is a gas under pressure; in the proposed product (12455-RUI) the carbon dioxide is in solid form ("dry ice"). The signal word for the 4 currently registered products is WARNING, the same as that proposed for 12455-RUI.

2. According to the EPA Reregistration Eligibility Document (RED) for Carbon and Carbon Dioxide (dated September 1991): "Four products containing pressurized carbon dioxide as an active ingredient are presently registered for fumigation to control insects and rodents in enclosed areas." In addition:

"The Environmental Protection Agency (EPA) has conducted a review of the scientific data base and other relevant information supporting the reregistration of carbon and carbon dioxide and has determined that the data base is sufficient to allow the EPA to conduct reasonable risk assessments. The data available to the EPA support the conclusion that the currently registered uses of carbon and carbon dioxide will not result in unreasonable effects to the environment or human health. No further generic data are required..."

"Accordingly, the EPA has determined that all products containing carbon or carbon dioxide as the active ingredient are eligible for reregistration..."

3. At standard atmospheric pressure (~14.7 lb/in<sup>2</sup> or 760 mmHg) solid carbon dioxide sublimates at -78.5°C or -109.3°F. As indicated on the proposed label: "Contact with skin can cause cold burns, blistering and frostbite." The proposed label also includes (under Precautionary Statements): "All handlers (including applicators) should wear insulating gloves and use appropriate eye protection."
4. The proposed label for RAT ICE states that it is a Restricted Use Pesticide. Based on the physical nature of this product, and the need for insulating gloves and eye protection, the

Agency can accept the restricted use classification, but not “Due to Hazard to Nontarget Organisms” which should be deleted. None of the currently registered carbon dioxide (gas under pressure) products is classified as restricted use “Due to Hazard to Nontarget Organisms” despite a similar mode of action (suffocation) against rats and other burrowing pests.

5. After careful consideration, CITAB concludes that the signal word WARNING (with assignment to toxicity category II for inhalation effects) is appropriate for 12455-RUI. Because the existing registered carbon dioxide (gas under pressure) products specify use of a supplied-air respirator only for enclosed areas (and 12455-RUI is labeled for outdoor use only) a respirator statement is not necessary. Because of the potential for cold burns, blistering and frostbite, 12455-RUI should also be classified in toxicity category II for dermal irritation effects, with appropriate (although somewhat modified) precautionary and first aid statements.
6. Since the protocol for an eye irritation study involves a dosage of 0.1 mL or 100 mg to the conjunctival sac (although it would probably be difficult to administer an exact amount of solid dry ice), there would be some localized (although not permanent) damage to the eye from freezing effects, so CITAB recommends that 12455-RUI be assigned to toxicity category II by this exposure route.
7. Based on the considerations given above, the following is the acute toxicity profile for 12455-RUI:

Acute oral LD <sub>50</sub>	Toxicity Category IV	Waived
Acute dermal LD <sub>50</sub>	Toxicity Category IV	Waived
Acute inhalation LC <sub>50</sub>	Toxicity Category II	Waived
Primary eye irritation	Toxicity Category II	Waived
Primary dermal irritation	Toxicity Category II	Waived
Dermal sensitization	Non-sensitizer	Waived

8. Based on the acute toxicity profile given above, the following is the precautionary and first aid labeling for 12455-RUI, based on output from the Label Review System and taking into consideration the physical nature of this formulation and potential eye irritation.

**PRODUCT ID #:** 012455-00148

**PRODUCT NAME:** RAT ICE

**PRECAUTIONARY STATEMENTS**

**SIGNAL WORD:** WARNING

**Hazards to Humans and Domestic Animals:**

May be fatal if inhaled. Contact with skin or eyes can cause cold burns, blistering and frostbite. Causes Do not breathe vapor. Do not get on skin, in eyes or on clothing. Wear long-sleeved shirt and long pants, socks, shoes, and insulating gloves. Wear protective eyewear.

**First Aid:**

If inhaled:

- Move the person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

If on skin:\*

- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

If in eyes:\*\*

- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

\*Standard statement to "Take off contaminated clothing" not appropriate.

\*\*Standard statements to "Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing" not appropriate (eyewash may exacerbate irritation from freezing)."

9. All acute toxicity data requirements for the registration of 12455-RUI have been satisfied by waivers based on available (and non-proprietary) information regarding solid CO<sub>2</sub>



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## WAIVER REQUEST

EPA FILE SYMBOL 12455-XXXX

### Rat Ice

#### 40 CFR SUBPART D Product Chemistry

- §158.320 Product identity and composition
- §158.325 Description of materials used to produce the product
  - §158.330 Product identity and composition
  - §158.330 Description of production process
  - §158.335 Description of formulation process
- §158.340 Discussion of formation of impurities
  - §158.345 Preliminary analysis
  - §158.350 Certified limits.
- §158.355 Enforcement analytical method.

#### Product Property Test Guidelines, OCSPP §830.1000

Bell Laboratories, Inc. requests a waiver from all pertinent requirements for submission under Product Property Test Guidelines, Health Effects Test Guidelines OCSPP §830.1000, as outlined in 40 CFR §158.310. Scientific data supporting the reregistration of this product has been reviewed by the Environmental Protection Agency (EPA) and determined to be sufficient. Further provision of data is not warranted. Appendix B of the Reregistration Eligibility Decision (RED), Carbon and Carbon Dioxide, September, 1991 states, that Product Chemistry required under 40 CFR Part 158 will be waived based on content of Section III, EPA Assessment of Active Ingredient. Data citations to support this waiver are found in Appendix C of Reregistration Eligibility Decision (RED), Carbon and Carbon Dioxide, September, 1991.(Attachment 1)

Bell Laboratories, Inc. contends provision of these citations satisfies data requirements set forth in 40 CFR §158.310, Product Property Test Guidelines, OCSPP §830.1000.



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## WAIVER REQUEST

EPA FILE SYMBOL 12455-XXXX

### Carbon Dioxide (Dry Pellets)

40 CFR SUBPART D Product Chemistry

Attachment 1:

Office of Pesticide Programs Reregistration Eligibility Document Bibliography for Carbon and Carbon dioxide.

1. Carbon dioxide. 1989. Federal Register 54 (12):2650-2651. January 19 (Thursday), 1989.
2. Clayton, G. D, and Clayton, F. E., eds., 1982. Patty's Industrial Hygiene and Toxicology, 3<sup>rd</sup>. Revised Edition, Vol 2c. Wiley Interscience, NY.
3. FASEB, 1979. "Evaluation of the Health Aspects of Carbon Dioxide as a Food Ingredient." NTIS 80-104615.
4. Gilman, A.G., Goodman, L. S., and Gilman, A, (1980) The Pharmacological Basis of Therapeutics, 6th Edition. Macmillan, New York, p. 954.
5. Jacobs, D. E., and Smith, M, S. (1988). "Exposures to Carbon Dioxide in the Poultry Processing Industry." American Industrial Hygiene Association Journal 49:624.
6. The Merck Index. Eleventh edition, (1989), p. 274.
7. National Institute for Occupational Safety and Health. NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards DHHS Publication No. 81-123. Cincinnati, Ohio: National Institute for Occupational Safety and Health, 1981.
8. NIOSH Pocket Guide to chemical Hazards. 1990. U.S Department of Health and Human Services, Public Health Service, Publication No. 90-117.
9. Sax, N. I., and Lewis, R, J, SR. 1989. Dangerous Properties of Industrial Materials, 7th Edition. van Nostrand Reinhold, New York, p. 710.
10. Schmeltz, L.L., and Whitaker, J.O., Jr. 1977. Use of Woodchuck Burrows by Woodchuck and Other Mammals. Trans. Kentucky Acad. Sci. 38(1-2):79-82.
11. Vaughan, T.A. 1961. Vertebrates Inhabiting Pocket Gopher Burrows in Colorado. J. Mammal. 42(2) :171-174, 32.



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## WAIVER REQUEST

EPA FILE SYMBOL 12455-XXXX

### Rat Ice

#### 40 CFR SUBPART F Toxicology

40 CFR 158.500 OCSPP 870.1100 Acute oral toxicity-Rat  
40 CFR 158.500 OCSPP 870.1200 Acute Dermal toxicity  
40 CFR 158.500 OCSPP 870.1300 Acute Inhalation toxicity-Rat  
40 CFR 158.500 OCSPP 870.2400 Primary eye irritation - rabbit  
40 CFR 158.500 OCSPP 870.2500 Primary dermal irritation  
40 CFR 158.500 OCSPP 870.2600 Dermal sensitization  
40 CFR 158.500 OCSPP 870.3200 21/28-day Dermal  
40 CFR 158.500 OCSPP 870.3250 90-day Dermal

40 CFR §158.500 Health Effects Test Guidelines OCSPP Series 870 Volume I.

Bell Laboratories, Inc. requests a waiver from all pertinent requirements for submission under Toxicology Health Effects Test Guidelines OCSPP Series §870 Volume I, as outlined in 40 CFR §158.500. Scientific data supporting the reregistration of this product has been reviewed by the Environmental Protection Agency (EPA) and determined to be sufficient. Further provision of data is not warranted. Appendix B of the Reregistration Eligibility Decision (RED), Carbon and Carbon Dioxide, September, 1991 states, that Toxicology required under 40 CFR Part 158 will be waived based on content of Section III, EPA Assessment of Active Ingredient. Data citations to support this waiver are found in Appendix C of Reregistration Eligibility Decision (RED), Carbon and Carbon Dioxide, September, 1991. (Attachment 1)

Bell Laboratories, Inc. contends provision of these citations satisfies data requirements set forth in 40 CFR §158.500, Health Effects Test Guidelines OCSPP Series 870 Volume I.



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## WAIVER REQUEST

EPA FILE SYMBOL 12455-XXXX  
**Carbon Dioxide (Dry Pellets)**

40 CFR SUBPART F Toxicology

Attachment 1:

Office of Pesticide Programs Reregistration Eligibility Document Bibliography for Carbon and Carbon dioxide.

1. Carbon dioxide. 1989. Federal Register 54 (12):2650-2651. January 19 (Thursday), 1989.
2. Clayton, G. D, and Clayton, F. E., eds., 1982. Patty's Industrial Hygiene and Toxicology, 3<sup>rd</sup>. Revised Edition, Vol 2c. Wiley Interscience, NY.
3. FASEB, 1979. "Evaluation of the Health Aspects of Carbon Dioxide as a Food Ingredient." NTIS 80-104615.
4. Gilman, A.G., Goodman, L. S., and Gilman, A, (1980) The Pharmacological Basis of Therapeutics, 6th Edition. Macmillan, New York, p. 954.
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6. The Merck Index. Eleventh edition, (1989), p. 274.
7. National Institute for Occupational Safety and Health. NIOSH/OSHA Occupational Health Guidelines for Chemical Hazards DHHS Publication No. 81-123. Cincinnati, Ohio: National Institute for Occupational Safety and Health, 1981.
8. NIOSH Pocket Guide to chemical Hazards. 1990. U.S Department of Health and Human Services, Public Health Service, Publication No. 90-117.
9. Sax, N. I., and Lewis, R, J, SR. 1989. Dangerous Properties of Industrial Materials, 7th Edition. van Nostrand Reinhold, New York, p. 710.
10. Schmeltz, L.L., and Whitaker, J.O., Jr. 1977. Use of Woodchuck Burrows by Woodchuck and Other Mammals. Trans. Kentucky Acad. Sci. 38(1-2):79-82.
11. Vaughan, T.A. 1961. Vertebrates Inhabiting Pocket Gopher Burrows in Colorado. J. Mammal. 42(2) :171-174, 32.



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## DATA MATRIX

Date	June 9, 2017	EPA Reg No./File Symbol	12455-XXX	Page	1 of 1
Applicant's/Registrant's Name & Address		BELL LABORATORIES, INC.			
		3699 Kinsman Blvd., Madison, WI 53704			
Product		<i>Rat Ice</i>			

Ingredient	Diphacinone
------------	-------------

[illegible]

Signature		Name and Title	John Lublinkhof, Director of Regulatory Affairs	Date	Jun 9, 2017
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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**1200 Pennsylvania Avenue, N.W.**  
**WASHINGTON, D.C. 20460**

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 1.25 hours per response for registration and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, Collection Strategies Division (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460. Do not send the completed form to this address.

**Certification with Respect to Citation of Data**

Applicant's/Registrant's Name, Address, and Telephone Number Bell Laboratories, Inc., 3699 Kinsman Blvd., Madison, WI 53704	EPA Registration Number/File Symbol 12455-xxx
Active Ingredient(s) and/or representative test compound(s) Diphacinone	Date June 9, 2017
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Control of rats in burrows	Product Name Rat Ice

**NOTE:** If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

**SECTION I: METHOD OF DATA SUPPORT (Check one method only)**

<input type="checkbox"/> I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	<input checked="" type="checkbox"/> I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).
--	---

**SECTION II: GENERAL OFFER TO PAY**

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☐ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

**SECTION III: CERTIFICATION**

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature 	Date June 9, 2017	Typed or Printed Name and Title John Lublinkhof, Director of Regulatory Affairs
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

June 20, 2017

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OPP Decision Number: D-530566  
EPA File Symbol or Registration Number: 12455-RUI  
Product Name: Rat Ice  
EPA Receipt Date: 12-Jun-2017  
EPA Company Number: 12455  
Company Name: BELL LABORATORIES, INC

JOHN LUBLINKHOF, PH.D.  
BELL LABORATORIES, INC  
3699 KINSMAN BLVD  
MADISON, WI 53704

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R334

NEW PRODUCT;MUP OR END USE PRODUCT WITH UNREGISTERED SOURCE OF  
THE ACTIVE INGREDIENT;REQUIRES SCIENCE DATA REVIEW;NEW PHYSICAL  
FORM;SELECTIVE DATA CITATION;

The fee with the up-front 75% discretionary refund, the amount due is \$4,960. Payment was received in the amount of \$5,301 so a refund in the amount of \$341 will be initiated when this action is completed unless there is a change in the action code. If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 347-0510.

Sincerely,

A handwritten signature in black ink, appearing to be "m/sh".

Front End Processing Staff  
Information Technology & Resources Management Division

**Fee for Service**

{1004869y~

This package includes the following

☒ New Registration

☐ Amendment

☒ Studies? ☐ Fee Waiver?

☐ volpay % Reduction: \_\_\_\_

for Division

☐ AD

☐ BPPD

☒ RD

Risk Mgr.

7

Receipt No.

S-

1004869

EPA File Symbol/Reg. No.

12455-RUI

Pin-Punch Date:

6/12/2017

☐ This item is NOT subject to FFS action.

Action Code:

Requested:

R310

Granted:

~~R230~~ ~~R333~~ R334

Amount Due: \$ \_\_\_\_

Parent/Child Decisions:

☐ Inert Cleared for Intended Use

☐ Uncleared Inert in Product

Reviewer: \_\_\_\_\_

Date: 6/14/17

Remarks:

DOCUMENT



Milestone Email: [avingum@belllabs.com](mailto:avingum@belllabs.com)

Resubmission: ☐ Yes ☒ No

Fee For Service: ☒ Yes ☐ No

Billable: ☒ Yes ☐ No

**V**



Product Name: Rat Ice

Me Too Product  
Name:



1e

Negotiated Due Date:

New Ingredient: ☐

Portal submission pkg# 20324. PRIA R310. New registration

### New Ingredient

Request Date:

### New Ingredient

Received Date: \_\_\_\_\_

Signature Date:

Form B: ☐

Signature Date:

Receipt Content	
Study	
CSF	

View/Edit

DOCUMENT 2

## April Vingum

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**From:** notification@pay.gov  
**Sent:** Friday, June 09, 2017 10:36 AM  
**To:** April Vingum  
**Subject:** Pay.gov Payment Confirmation: PRIA Service Fees

Your payment has been submitted to Pay.gov and the details are below. To confirm that the payment processed as expected, you may refer to your bank statement on the scheduled payment date. If you have any questions or wish to cancel this payment, you will need to contact the agency you paid at your earliest convenience.

If you chose the option to receive payment reminders in your user profile and this is a deferred or recurring payment, you will receive a reminder email several days before the payment is processed. You may change your payment reminder preferences and email address in your user profile at any time.

If you wish to cancel this transaction, log in to your account at <https://www.pay.gov/> and choose the Pending tab of the Payment Activity page.

Application Name: PRIA Service Fees  
Pay.gov Tracking ID: 262UTFUT  
Agency Tracking ID: 75261509233

Account Holder Name: Bell Laboratories  
Transaction Type: ACH Debit  
Transaction Amount: \$5,301.00  
Payment Date: 06/12/2017  
Account Type: Business Checking  
Routing Number: [REDACTED]  
Account Number: [REDACTED]

Transaction Date: 06/09/2017 11:35:37 AM EDT  
Total Payments Scheduled: 1  
Frequency: OneTime

Registration Number: 12455-xxx  
Company Name: Bell Laboratories  
Company Number: 12455  
Action Code: r310

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

## **Yanchulis, Michael**

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**From:** Herrick, Jacquelyn  
**Sent:** Monday, June 19, 2017 1:46 PM  
**To:** Yanchulis, Michael  
**Cc:** Suarez, Mark  
**Subject:** 12455-RUI Discretionary Refund

Hi Mick,

Per our discussion, 12455-RUI should be coded as an R230 \$26,427 (additional use, non-food outdoor) and R333 \$19838 (new product with unregistered source).

The registrant, Bell Laboratories should be given a discretionary refund of \$34,698.75 after the Agency collects the mandatory 25%.

Let me know if you have any questions.

Thanks,  
Jackie

Jacquelyn Herrick (Marchese), Entomologist  
Invertebrate & Vertebrate Branch 3  
Registration Division  
U.S. EPA (Mail Code 7505P)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

(703) 347-0559  
[herrick.jacquelyn@epa.gov](mailto:herrick.jacquelyn@epa.gov)

## Yanchulis, Michael

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**From:** Herrick, Jacquelyn  
**Sent:** Tuesday, June 20, 2017 7:38 AM  
**To:** Yanchulis, Michael  
**Cc:** Suarez, Mark  
**Subject:** RE: Additional PRIA fee payment required for application to register Rat Ice (EPA Symbol No. 12455-RUI)

Thanks Mick. Sorry the last email wasn't clearer, but we've decided the R334 code is the only code that applies to this product; the R230 code is not applicable.

Jackie

Jacquelyn Herrick (Marchese), Entomologist  
Invertebrate & Vertebrate Branch 3  
Registration Division  
U.S. EPA (Mail Code 7505P)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

(703) 347-0559  
[herrick.jacquelyn@epa.gov](mailto:herrick.jacquelyn@epa.gov)

**From:** Yanchulis, Michael  
**Sent:** Tuesday, June 20, 2017 6:43 AM  
**To:** Herrick, Jacquelyn <[Herrick.Jacquelyn@epa.gov](mailto:Herrick.Jacquelyn@epa.gov)>  
**Cc:** Suarez, Mark <[Suarez.Mark@epa.gov](mailto:Suarez.Mark@epa.gov)>  
**Subject:** RE: Additional PRIA fee payment required for application to register Rat Ice (EPA Symbol No. 12455-RUI)

Hi Jackie,

The fee for codes R333 and R334 are the same so it will not affect the amount due. FYI, OPPIN cannot handle cents so I always round the amounts to the whole dollar so the amount due for the R334 would be \$4,960. If they pay \$4,959.50, I will round it up to \$4,960.

*Mick Yanchulis  
Information Services Branch  
Office of Pesticide Programs  
U.S. Environmental Protection Agency*

**From:** Herrick, Jacquelyn  
**Sent:** Monday, June 19, 2017 5:07 PM  
**To:** Yanchulis, Michael <[Yanchulis.Michael@epa.gov](mailto:Yanchulis.Michael@epa.gov)>  
**Cc:** Suarez, Mark <[Suarez.Mark@epa.gov](mailto:Suarez.Mark@epa.gov)>  
**Subject:** RE: Additional PRIA fee payment required for application to register Rat Ice (EPA Symbol No. 12455-RUI)

Hi Mick,

Mark, Meredith, and I discussed this further and decided an R334 (New product; MUP or End use product with unregistered source of the active ingredient; requires science data review; new physical form; etc. Selective data citation) PRIA code would be most appropriate for this dry ice product. This product still qualifies for a discretionary refund. I'm really sorry for the confusion and extra work this has caused.

R334 = \$19838: 25% = \$4959.50; 75% = 14878.50

We called the registrant and he is expecting this change.

Thanks,  
Jackie

Jacquelyn Herrick (Marchese), Entomologist  
Invertebrate & Vertebrate Branch 3  
Registration Division  
U.S. EPA (Mail Code 7505P)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

(703) 347-0559  
[herrick.jacquelyn@epa.gov](mailto:herrick.jacquelyn@epa.gov)

**From:** Yanchulis, Michael  
**Sent:** Monday, June 19, 2017 2:17 PM  
**To:** 'jlublinkhof@belllabs.com' <[jlublinkhof@belllabs.com](mailto:jlublinkhof@belllabs.com)>  
**Cc:** 'avingum@belllabs.com' <[avingum@belllabs.com](mailto:avingum@belllabs.com)>; Herrick, Jacquelyn <[Herrick.Jacquelyn@epa.gov](mailto:Herrick.Jacquelyn@epa.gov)>  
**Subject:** Additional PRIA fee payment required for application to register Rat Ice (EPA Symbol No. 12455-RUI)

Dear Dr. Lublinkhof:

The Registration Division's PRIA team has identified the above application as subject to action codes R230 and R333, not R310 as you requested.

- R230 – Additional use; non-food; outdoor.
- R333 – New product; MUP or End use product with unregistered source of active ingredient; requires science data review; new physical form; etc. Cite-all or selective data citation where applicant owns all required data.

The product manager team also has authorized an up-front 75% discretionary refund for both action codes: \$19,820 for action code R230 with \$6,607 due and \$14,878 for action code R333 with \$4,960 due so the total fee is \$11,567; however this does not include your payment in the amount of \$5,301, so the additional amount due for this application is \$6,266. Please email me a pay.gov receipt in the amount of \$6,266 as proof of fee payment by June 30. If you have questions about the assignment of the above action code, please contact Jacquelyn Herrick at (703) 347-0559 or [herrick.jacquelyn@epa.gov](mailto:herrick.jacquelyn@epa.gov).

*Mick Yanchulis  
Information Services Branch  
Office of Pesticide Programs  
U.S. Environmental Protection Agency*

